

Notice of Allowability

Application No.

10/776,684

Examiner

Dwin M. Craig

Applicant(s)

KARCHMER ET AL.

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/5/06.
2. ☒ The allowed claim(s) is/are 1-12.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

And

EXAMINERS AMENDMENT

1. Claims 1-12 are allowed.

EXAMINERS AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michael J. Ferrazano Reg. No. 44,105 on 1/29/07.

The application has been amended as follows:

- 2.1 Claim 1 has been changed to:

-- A method of conducting a behavioral simulation of one or more process blocks in an electronic design, the method comprising:

receiving an assignment decision diagram (ADD) representation of the process block and including one or more control nodes for maintaining control flow through a simulator thereby creating one or more break points; and

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running the simulation of the assignment decision diagram representation, whereby the simulation is stopped when control nodes are encountered so that the state of the simulation is displayed to a user. --

2.2 Claim 2 has been changed to:

-- A method as recited in claim 1, wherein the assignment decision diagram representation comprises:

an assignment value portion representing a computation of values that are to be assigned to a storage unit of an output port, wherein the values are computed from current contents of storage units, input ports, or constants provided to the ADD;

an assignment condition portion connected as a data flow path representing the computation of a particular condition such that the end product of the condition computation is a binary value that evaluates to either *TRUE* or *FALSE*.

an assignment decision node (ADN) that selects a value from a set of input values computed by the assignment portion based upon conditions computed by the assignment condition portion; and

an assignment target portion that is provided with the selected value from the corresponding ADN corresponding to a true ADN condition. --

2.3 Claim 3 has been changed to:

-- A method as recited in claim 1, wherein the one or more control nodes is selected from the group comprising a query control node used to represent a conditional branch in a control flow, an evaluation/assignment control node used to represent an assignment operation, a null

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control node used as a place holder, and a suspend control node used to suspend execution of the process block. --

2.4 Claim 5 has been changed to:

A method as recited in claim 4, wherein the one or more control nodes includes a control node pointer that is used to point to the portion of the assignment decision diagram representation being simulated.

2.5 Claim 8 has been changed to:

-- A behavioral simulator for conducting a behavioral simulation of one or more process blocks in an electronic design, the behavioral simulator comprising:

one or more processors;

memory coupled to at least one of the one or more processors; and

a display coupled to at least one of the one or more processors to display simulation results, wherein the one or more processors are configured or designed to run a simulation of an assignment decision representation of the one or more process blocks and stop the simulation when encountering control nodes in the assignment decision representation so that the state of the simulation can be observed.--

2.6 Claim 9 has been changed to:

-- A behavioral simulator as recited in claim 8, wherein the display comprises:

an input data portion arranged to display selected input data representing the one or more process blocks in the electronic design;

a process block status portion arranged to display a status of selected process blocks;

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a process block portion arranged to display process statements included in the process block being simulated; and

a process block variable portion arranged to display those variables to be viewed while the simulation of the process block is paused. --

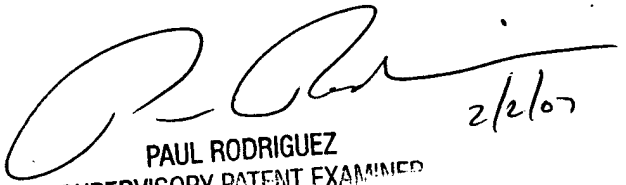
Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwain M. Craig whose telephone number is (571) 272-3710. The examiner can normally be reached on 10:00 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul L. Rodriguez can be reached on (571) 272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dwain McTaggart Craig


PAUL RODRIGUEZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER
2/2/07